



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/672,511	09/28/2000	Cheng-Chieh Lee	4	2118

22046 7590 08/24/2007
DOCKET ADMINISTRATOR
LUCENT TECHNOLOGIES INC.
ROOM 2F-192
600-700 MOUNTAIN AVENUE
MURRAY HILL, NJ 07974-0636

EXAMINER

ARMSTRONG, ANGELA A

ART UNIT	PAPER NUMBER
----------	--------------

2626

MAIL DATE	DELIVERY MODE
-----------	---------------

08/24/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/672,511	Applicant(s) LEE, CHENG-CHIEH	
	Examiner Angela A. Armstrong	Art Unit 2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2/26/07.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-64 is/are pending in the application.
- 4a) Of the above claim(s) 8,9,18,19,24,25,30,31,40,41,50,51,56,57,62 and 63 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,10-12,14-17,20-23,26-29,32-37,42-44,46-49,52-55,58-61 and 64 is/are rejected.
- 7) ☒ Claim(s) 6,7,13,38,39 and 45 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. In response to the Office Action mailed February 26, 2007, applicant has filed a request for reconsideration of the rejection under 35 USC 102 to Jafarkhani. The Examiner's response to Applicant's request for reconsideration follows.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-5, 10-12, 14-17, 20, -23, 26-29, 32-37, 42-44, 46-49, 52-55, 58-61, and 64 are rejected under 35 U.S.C. 102(e) as being anticipated by Jafarkhani et al (US Patent No. 6,823,018).

4. Jafarkhani discloses a multiple description coding communication system.

5. Regarding claim 1, Jafarkhani discloses a multi-descriptive encoder for generating a plurality of multi-descriptive bit streams from a sing source signal (Figures 4, 13), the encoder comprising: a source signal input port for supplying the source signal (col. 4, lines 1-4); a first coder applied to the source signal input port, the first coder for generating a first multi-descriptive bit stream from the source signal, the first coder employing a first coding algorithm

Art Unit: 2626

which includes a first quantization process in which a first data value based on the source signal is coded with use of a corresponding first quantized data value (col. 5, line 15 to col. 6, line 14; col. 7, line 48 to col. 8, line 60), thereby resulting in a corresponding first quantization error representative of a difference between said first data value and said first quantized data value; and a second coder applied to the source signal input port, the second coder for generating a second multi-descriptive bit stream from the source signal, the second coder employing a second coding algorithm which includes a second quantization process in which a second data value, based on the source signal and corresponding to said first data value, is coded with use of a corresponding second quantized data value (col. 5, line 15 to col. 6, line 14; col. 7, line 48 to col. 8, line 60), thereby resulting in a corresponding second quantization error representative of a difference between said second data value and said second quantized data value, wherein said second quantized data value as produced by said second quantization process is based at least in part on said first quantization error resulting from said first quantization process.

Regarding claim 2, Jafarkhani discloses the first coding algorithm and said second coding algorithm differ in at most the corresponding quantization processes included therein (col. 4, line 60 to col. 6, line 14)

Regarding claim 3, Jafarkhani discloses the source signal is a speech signal (col. 4, line 31).

Regarding claim 4, Jafarkhani discloses second quantized data value as produced by said second quantization process is determined so that said second quantization error resulting from said second quantization process is such that if combined with said first quantization error resulting from said first quantization process to produce a net quantization error, said net

Art Unit: 2626

quantization error will be less than said first quantization error (col. 5, line 51 to col. 6, line 14; col. 7, line 48 to col. 8, line 60).

Regarding claim 5, Jafarkhani discloses first quantization process and said second quantization process each select said corresponding quantized data values from a single predetermined set of quantization values (col. 4, line 66 to col. 5, line 4).

Regarding claims 10-12, Jafarkhani discloses modifying said first and second quantization processes in a periodic fashion (col. 7, line 48 to col. 8, line 60), such that after a first predetermined amount of time (the first redundancy processing/calculation), (i) said first quantization process produces a subsequent first quantized data value based at least in part on a corresponding subsequent second quantization error resulting from said second quantization process, and (ii) said second quantization process produces a subsequent second quantized data value not based on a corresponding subsequent first quantization error resulting from said first quantization process; and after a second predetermined amount of time (the next redundancy processing/calculation), (iii) said second quantization process produces a further subsequent second quantized data value based at least in part on a corresponding further subsequent first quantization error resulting from said first quantization process, and (iv) said first quantization process produces a further subsequent first quantized data value not based on a corresponding further subsequent second quantization error resulting from said second quantization process (second or subsequent first and second quantization processes are inherent in the coding algorithm since the system is using the redundancy algorithm to improve processing and obtain the most optimum data bitstreams).

6. Regarding claims 21 and 23, Jafarkhani discloses a multiple description coding communication system and provides the appropriate decoding system in the communication system for reconstructing the transmitted information (Figure 5 and 6) such that the system provides for decoding the plurality of multi-descriptive bit streams and comprises a plurality of decoders corresponding to the plurality of multi-descriptive bit streams to be decoded, each of said decoders generating a corresponding decoded bit stream (col. 8, line 65 to col. 11, line 30); and a mixer for combining said decoded bit streams to produce the reconstructed source signal (col. 4, lines 48-57), and wherein the plurality of multi-descriptive bit streams have been generated by a multi-descriptive encoder comprises a source signal input port for supplying the source signal (col. 4, lines 1-4); a first coder applied to the source signal input port, the first coder for generating a first multi-descriptive bit stream from the source signal, the first coder employing a first coding algorithm which includes a first quantization process in which a first data value based on the source signal is coded with use of a corresponding first quantized data value (col. 5, line 15 to col. 6, line 14; col. 7, line 48 to col. 8, line 60), thereby resulting in a corresponding first quantization error representative of a difference between said first data value and said first quantized data value; and a second coder applied to the source signal input port, the second coder for generating a second multi-descriptive bit stream from the source signal, the second coder employing a second coding algorithm which includes a second quantization process in which a second data value, based on the source signal and corresponding to said first data value, is coded with use of a corresponding second quantized data value (col. 5, line 15 to col. 6, line 14; col. 7, line 48 to col. 8, line 60), thereby resulting in a corresponding second quantization error representative of a difference between said second data value and said second

Art Unit: 2626

quantized data value, wherein said second quantized data value as produced by said second quantization process is based at least in part on said first quantization error resulting from said first quantization process.

Regarding claim 22, Jafarkhani discloses the source signal is a speech signal (col. 4, line 31).

Regarding claim 26, Jafarkhani discloses each of said plurality of decoders has a corresponding internal state thereof, and wherein said internal state corresponding to a first one of said plurality of decoders is updated based on said internal state corresponding to another one of said plurality of decoders when said multi-descriptive bit stream corresponding to said first one of said plurality of decoders experiences a frame erasure (col. 5, lines 33-35 and 55-60 – as Jafarkhani describes the decoder determines which channels are lost (41) and performs reconstruction using available or most useful of the received data; C' and D' or C' only or D' only).

7. Regarding claims 14-17, 20, 33-37, 42-44, 46-49, and 52, the claims are similar in scope and/or content to the encoder of claims 1-5 and 10-12, and therefore are rejected under similar rationale.

8. Regarding claims 27-29, 32, 53-55, 58-61 and 64, the claims are similar in scope and/or content to the decoder of claims 21-23 and 26, and therefore are rejected under similar rationale.

Allowable Subject Matter

9. Claims 6-7, 13, 38-39, and 45 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

10. Applicant's arguments filed May 24, 2007, have been fully considered but they are not persuasive.

Applicant argues the prior art reference to Jafarkhani does not teach or disclose a second quantization process based in part on a quantization error from a first quantization error. The Examiner cannot concur. Jafarkhani discloses the second method of quantization jointly introduces redundancy into the system by correlating C and D and by coding C-perp and D-perp. The purpose of this joint quantization scheme is to allow C-perp and D-perp to provide some improvement in reconstruction accuracy. Since these variables are created in the first quantization process, the second process of jointly quantizing the variables to improve reconstruction (to account for distortion) is a quantization process based on errors from a first quantization process.

Applicant argues the prior art reference to Jafarkhani does not teach a single source signal. The Examiner cannot concur. Jafarkhani's "input signal" shown in Figure 1 provides adequate support for a single source signal.

Art Unit: 2626

Applicant argues the prior art to Jafarkhani does not disclose a plurality of decoders employing an identical decoding algorithm. The Examiner cannot concur. Jafarkhani's disclosure of the implementation of multiple decoders (col. 9, lines 52-60) provide adequate support for the plurality of decoders.

Conclusion

11. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

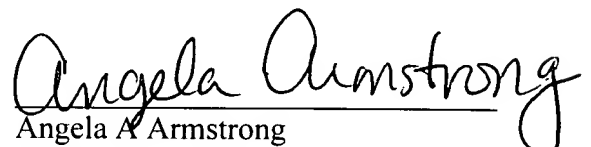
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela A. Armstrong whose telephone number is 571-272-7598. The examiner can normally be reached on Monday-Thursday 11:30-8:00 PM.

Art Unit: 2626

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on 571-272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Angela A. Armstrong
Primary Examiner
Art Unit 2626

AAA
August 17, 2007